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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/810,659

03/29/2004

Soon-Sung Yoo

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EXAMINER

KIM, RICHARD H

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/810,659

Applicant(s)

YOO ET AL.

Examiner

Richard H. Kim

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2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Ihara (US 6,894,734 B1) in view of Nakayoshi (US 6,310,667 B1) and Suzuki et al (US 5,844,255).

Ihara discloses a device comprising a substrate (101); a gate line (11) on the substrate, wherein the gate line; a first insulating layer (5) on the gate line and the substrate; a semiconductor layer on the first insulating layer and over a portion of the gate line; a data line (12) over the first insulating layer and that crosses the gate line, the data line including a protruding portion (3) that projects in a direction of the semiconductor layer and that forms a drain electrode, a source electrode (4) spaced apart from the drain electrode and extending in a rectangular region partially defined by the gate and data lines; a passivation layer on the drain electrode (8) on the drain electrode, the passivation layer having a source contact hole that exposes the source electrode; and a pixel electrode (6) formed over the passivation layer, the pixel electrode electrically connecting the source electrode via the source contact hole, wherein the pixel electrode (25) extends over a portion of the gate line so as to form a storage capacitor comprised of a capacitor electrode extending from the pixel electrode (105), the gate line, and the first insulating layer therebetween, wherein the storage capacitor further includes a short-preventing part (8) disposed between the pixel electrode and the gate line, wherein the short-

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preventing part has a stepped portion that overlaps a stepped end portion of the gate line.

However, the reference fails to disclose the device comprising gate pads and data pads, and wherein the source electrode is extended from the data line and the source electrode extends into the pixel region.

Nakayoshi discloses that the position of the source electrode and the drain electrode are interchangeable (col. 13, lines 12-26).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the device to comprise gate and data pads since gate and data pads are well known in the art in order to send signals from the driving circuits to the display lines. Furthermore, it would have been obvious to one having ordinary skill in the art at the invention was made to switch the position of the source electrode and the drain electrode, since the according to Nakayoshi, the positions of the two are interchangeable and does not affect the “function of the liquid crystal display device (col. 13, lines 25 and 26).

Furthermore, Ihara does not disclose that the end portion of the semiconductor layer under the data line is substantially a same width as an end portion of the date line.

Suzuki et al. discloses a device wherein the end portion of the semiconductor under the data line is substantially the same width as an end portion of the data line (col. 2, lines 60-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the end portion of the semiconductor under the data line is substantially the same width as an end portion of the data line since one would be motivated to limit an increase in power consumption (col. 14, lines 65-67).

Allowable Subject Matter

3. Claims 20 and 21 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fails to teach or disclose the array substrate of claim 19, wherein the short-preventing part includes the semiconductor layer and the passivation layer.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Richard H Kim
Examiner
Art Unit 2871

RHK